FITCHBURG GAS & ELECTRIC

DEPRECIATION STUDY INFORMATION REQUEST

Management Applications Consulting, Inc. (MAC)

GAS PROPERTIES

I. PRODUCTION PLANT

Are there any plans or long-range forecasts to retire the LNG or the LPG plant? If not, what is your estimate of how many more years each will likely be kept in service. We are NOT asking for a commitment, just an informed estimate.

Response: No retirement plans exist at this time. We do not have an exact estimate for how long these plants are likely to remain in service. We have planning studies that look out for the next 10 years and these plants are forecast to remain operational.

Are there plans or forecasts to retire or retire and replace any significant components of either plant?

Response: Yes. The following projects are planned:

Y2002 – LPGA plant electric system

Y2002 – LPGA plant roof

Y2003 – LPGA plant compressors

Y2003 – LPGA plant odorant tank

Y2003 – LPGA plant specific gravity meter

Y2003 – LPGA plant control system

Y2003 – LPGA plant orifice meter

Do you have demolition cost estimates for either plant?

Response: No.

We need first-hand input as to any events or proposed events which could impact the life and cost to retire those facilities.

Response: We are not aware of any specific events or proposed events at this time.

II. DISTRIBUTION FACILITIES

A. 1. Please identify and describe any buildings likely to be retired and/or replaced within the next ten years. Whenever retired, is it likely the company will raze the structures, sell them, or sell the sites including the structures?

Response: None planned within the next ten year planning horizon.

2. Do you expect your Distribution Plant retirements of the next ten to twenty years to be significantly higher or lower than those of the past ten to twenty years? If so, why?

Response: Slightly hirer. In 2001 we increased the amount of Cast Iron pipe replaced annually from 3960 feet to 10560 feet. This higher rate is projected to continue into the foreseeable future.

B. 1. In regard to mains, is there a partial or total replacement program completed, underway, or planned? If completed, over what span of years did it take place and when was it completed? If underway, when did it begin and what are the estimated annual amounts to be retired over what period? If planned, over what period, and what are the estimated annual retirements?

I think C.I. repl. is LTD to ≤6" ϕ ~371,000 ft. of ≤6" ϕ C.I. FGE has ∴ maybe ±35 yr.

Response: We have been following a Cast Iron main replacement program since the early 1980s. The program initially started with a replacement rate of no less than 3960 feet per year. In 2001 we increased the amount of Cast Iron pipe replaced annually from 3960 feet to 10560 feet. This higher rate is projected to continue into the foreseeable future; 50 years or more.

2. Are there any maintenance/rehabilitation programs completed, underway, or planned which might extend the life of mains? (Such as plastic inserts, coating the interior surfaces, and/or cathodic protection).

Response: Yes. The company has a regular ongoing program to encapsulate bell joints for many years and this program should continue into the foreseeable future.

3. If it was assumed no more competitively priced natural gas was to be available after some future date – say the year 2050 – do you anticipate the existing system would be used to distribute some other energy source, like hydrogen?

Response: We have no studies or plans for this type of change.

4. Most current main retirements are associated with replacements, not abandonments. What is your estimate of the gross salvage and costs to retire for a representative job, assuming a representative job to be the retirement and replacement of 200 to 500 feet of main?

Response: There are no salvage costs since mains are abandoned in place.

What is the practice in separating the costs to retire from the installation costs?

Response: Work associated with abandoning the main is considered retirement. IE. Labor and materials to cut & cap the pipe and purging to air.

Are crews required to charge separate work orders or accounts within a work order?

Response: All work is charged to the same work order but there are separate account codes to differentiate between construction and retirement costs.

How diligent are crews in reporting this separation?

Response: To the best of our knowledge the practice listed above is followed.

Is the separation made by account based on the estimate or other basis? If another basis, what is it?

Response: Estimates for jobs include all costs and separation between construction is based on actual costs.

When replacing mains, is the new main placed in the same trench and the old main removed, or is the new main placed in a new trench and the old main abandoned?

Response: New trench.

5. Do any or all of the current costs of retiring old mains get charged to the construction of the new main?

   Response: No

6. Do you anticipate the physical life of plastic mains to be more or less than steel mains?

   Response: More.

7. What is your estimate of the percent of mains retirements which are NOT due to the physical condition of the pipe?

   Response: Very small. Most of the mains retired are associated with the Cast Iron program discussed above or corrosion related replacements. We would guess this figure to be much less than 1 percent of our annual main installations.

8. Have you or do you expect to physically remove and salvage mains of a certain minimum size; e.g., 8" (and up)? Details, please.

   Response: No.

C. 1. Have there been or are there likely to be any extra-ordinary retirements of M&R Station Equipment in the period from about 10 years ago to 10 years forward?

Response: No.

Is there any reason to anticipate the retirement experience of the past 10 to 20 years may not be fairly representative of the future for this equipment? For example, you might be entering into a period in which you will rebuild M&R stations and/or City Gate Stations. Another life change example might be that automation/electronics is now more prevalent.

Response: Regulator Stations have historically been installed, upgraded or abandoned on an individual basis and this previous practice is likely to continue in the future.

Please advise us of the extent of capital expended for SCADA and/or other electronic control/monitoring schemes; these dollars surely will not realize the life expected of the typical M&R equipment.

Response: SCADA is being introduced at regulator stations. In 2002 inlet/outlet pressures are to be connected to SCADA at Kraft St, and in 2003-2006 there is provision in the 5 year budget to introduce SCADA at 3 stations each year.

2. What is your estimate of salvage values and removal costs for this equipment upon retirement?

Response: There are no salvage values associated with regulator stations. The average cost of removal of the last two station upgrades is $3,400.

D. 1. Services is an account which can generally be analyzed by statistical methods to develop an indication of the historical average service life; however, there are frequently reasons to doubt that the future experience will mirror the past. Such things as conversion programs to replace steel services and/or plastic inserts are examples. Have there been or are there any such programs planned? Please provide us the particulars.

Response: No.

2. Do you anticipate the physical life of plastic services will be different than steel?

Response: No.

Do you have any copper services: Please enumerate.

Response: No.

3. Costs to retire relative to the original cost of retired services generally produce extremely high percentage relationships, even though most are retirements with replacements. What does it cost to retire a typical service?

   Response: $400.

   What is the practice in separating the costs to retire from the installation costs?

   Response: Work associated with abandoning the service is considered retirement. IE. Labor and materials to cut & cap the pipe, remove the old riser and purging to air.

   Are crews required to charge separate work orders or accounts within a work order?

   Response: All work is charged to the same work order but there are separate account codes to differentiate between construction and retirement costs.

   How diligent are crews in reporting this separation?

   Response: To the best of our knowledge thes practice listed above is followed.

   Is the separation made by accounting based on the estimate or other basis? If another basis, what is it?

   Response: Estimates for jobs include all costs and separation between construction is based on actual costs.

E. As with Services, a historical indication of average service life can be developed for the Meters account, but we need to know if there are any reasons to suspect the future may not mirror the past. A prime example would be any program to retire a certain size, type, or age of meter. Another consideration has to do with your meter shop practice. If you have maintained and rebuilt meters in-house, but are going to change to retiring the meters and letting manufacturers function as your meter rebuild shop, the average dollar life of the account could change drastically. Do you realize any salvage value from retired meters?

   Response: There are no salvage values associated with meters.

   Are removal costs associated with retiring meters expensed or charged to capital?

   Response: We do not allocate cost of removal for meters. Per DTE guidelines this cost is to expensed to the 878 Meter & House Regulator Expense.

Obviously another consideration is AMR. Are you getting into AMR or planning to do so soon? Please elaborate. Such a change in equipment can have a significant impact upon the life of the meters account.

Response: AMRs are being installed on a limited basis plan at hard-to-read customers where the economics are justified. There are no current plans to adopt AMR extensively.

F. House Regulators – the comments and questions regarding meters apply to this account.
In which plant account categorized, if you Account 383? Since what year?

Response: This information has already been supplied by accounting.

G. Investments Relative in Industrial Customers – If you have any Industrial customers, we should consider how many more years of service can be expected over which to recover the investments in equipment soley for these customers. We should also quantify and age the investments in this equipment.

Response: Accounting do not differentiate between residential and I&C customers.

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DEPRECIATION STUDY INFORMATION REQUEST

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ELECTRIC PROPERTIES

OUTLINE

1. TRANSMISSION PLANT

A. Substations

1. The purpose of this discussion is to try to identify any circumstances that might cause lives of Transmission substation equipment in the near term future to be different than those of the past 10 to 20 years.

   There are many reasons for the retirement of substation equipment other than the equipment being worn out; the last page of this request is a listing of some of the causes of the retirement of utility plant. Please look it over and keep it in mind when you give us your opinion as to whether you think there will be more or less of your Company's utility plant retired in the next ten years than in the past ten years.

2. If a specific substation is expected to be retired or substantially rebuilt, please identify it and the years of contemplated retirement or rebuild.

Response: The following projects are planned:
Y2002 - Summer Street S/S 69 kV insulator replacements
Y2002 - Summer Street S/S transformer will be rebuilt to add LTC
Y2002 – Flagg Pond S/S preparations for new control house
Y2003 – Flagg Pond S/S control house replacement
Y2003 - Summer Street S/S 15 kV insulator replacements
Y2003 - Summer Street S/S 15 kV insulator replacements

3. When you move a substation transformer, circuit breaker or other large piece of equipment, do you retire the original installation labor and transfer the equipment costs?

Response: Yes.

4. Based upon your experience, are equipment foundations likely be the absolute oldest substation property in service or are they typically retired when the equipment they supported is retired? That is, do

foundations ever or often get reused?

Response: It is agreed that one of the oldest items in a substation would be the foundations. Other items may be the below-grade ground grid, the fence, and the structural steel.
We try to utilize existing foundations for replaced equipment if the foundations are in good condition.

B. Transmission Lines

Often the historic retirement experience does not provide a reliable guide to the future for transmission lines; therefore, we expect engineering judgment may be a predominant factor in the estimation of average lives. For this reason we need knowledgeable input to help us.

1. If any transmission lines portions thereof are scheduled for retirement, rebuild, or voltage upgrade, will you please identify them in such manner that we may approximately quantify the dollars, and please advise when the activity may occur?

Response: There are no immediate plans in our five year budget to do any major transmission line work.

2. Please advise us of any occurrences, development, and factors projected which might be relevant and which could assist us in estimating the average lives, salvage and removal costs.

Response: The general practice in establishing loading limitations for transmission lines does not allow for planned events that cause loss of life. We do not expect that a transmission line will be rebuilt because of loss of physical or electrical integrity (excluding damage as a result of external causes such as weather). Transmission lines are typically rebuilt and retired as a result of system requirements.

Translation: we generally assume that transmission lines "could" last forever. In some cases, they last many years longer than our depreciation schedules would suggest. Replacements are actually driven by load requirements and other factors. Hence, average lives would tend to not be influenced by new technologies or other factors. However, load growth in recent years has been at a fairly rapid pace, and this is likely to continue. This would support continued investment and replacement on a forward going basis to meet system demands.

C. Other

Do you expect Distributed Generation to impact your transmission system within the next 10 to 20 years? If so, what might the impact be upon the Transmission Plant now in service?

Response: We do not have any studies and long range strategies to support an answer one way or the other. However, my opinion would be that DG will not significantly impact our transmission system. Impacts, if any, are expected to be more pronounced on the distribution system.

11. DISTRIBUTION PLANT

A. Overhead Distribution

1. Are 4 kV or lower primary distribution voltages expected to become extinct as higher voltages take over, or will they be contained? How?

Response: 4kV or lower primary distribution voltages are not expected to become extinct. They are, however, likely to be contained, and may shrink in extent over time. The evaluation of whether to increase to a higher voltage or expand the existing lower voltage is performed on a case by case basis; no specific program exists to upgrade system voltages. However, expansion of 4 kV circuitry is generally avoided, new substations at this voltage are not contemplated, and the amount of circuitry is generally shrinking as voltage conversions are completed. All new construction, including 4kV circuitry, is constructed to 15kV.

2. Are there any plans to convert 13 kV to higher distribution voltages? When and over what period of time?

Response: No

3. Are any distribution substations scheduled for retirement or significant rebuild? Identify them and advise when this might occur.

Response: The following projects are planned:
Y2002 – Canton St S/S 4kV transformer retrofill. RETROFIT?
Y2002 – River St S/S transformer replacement
Y2002 – Electric Station equipment removal and retirement
Y2002 – Nockege S/S fence replacement and retired equipment removal
Y2002 – Princeton Rd S/S transformer differential scheme upgrade
Y2003 – West Townsend S/S overvoltage protection modifications
Y2003 – West Fitchburg S/S – Retire and dispose
Y2003 – Nockege S/S 4kV equipment replacements

Y2003 – Canton St S/S 69kV insulator replacements
Y2003 - Wallace Rd S/S15kV insulator replacements
Y2003 - Princeton Rd S/S Distribution circuit reconfiguration
Y2003 – Flagg Pond S/S metering replacements
Y2004 – Nockege S/S 15kV insulator replacements
Y2005 - Canton St S/S 4kV & 15kV structure & equipment replacements
Y2005 – Nockege S/S 15kV breaker replacements
Y2005 – Pleasant St S/S 15kV insulator replacements
Y2005 – Rindge Rd S/S 15kV insulator replacements
Y2005 – Canton St S/S 15kV insulator replacements
Y2005 – Flagg Pond S/S 15kV insulator replacements
Y2006 – Pleasant St S/S 4kV insulator replacements
Y2006 – Canton St S/S 4kV insulator replacements

4. When you move a substation transformer, circuit breaker or other large piece of equipment, do you retire the original installation labor and transfer the equipment costs?

Response: Yes.

5. Based upon your experience, are equipment foundations likely be the absolute oldest substation property in service or are they typically retired when the equipment they supported is retired? That is, do foundations ever or often get reused?

Response: It is agreed that one of the oldest items in a substation would be the foundations. Other items may be the below-grade ground grid, the fence, and the structural steel.
We try to utilize existing foundations for replaced equipment if the foundations are in good condition.

B. Underground Distribution

Is direct burial primary cable still experiencing the same problems (concentric neurtral corrosion and/or treeing) that it was in the 1970's? That is, should we still expect a significantly shorter life from direct buried cable than for cable in conduit?

Response: It is not clear what specific 1970's direct burial primary cable problem is being referenced. We are aware of industry-wide problems with early types of polyethylene cable during the 1960's and 1970's. We have in fact experienced problems with this vintage of cable, but have not necessarily attributed the problems to direct burial. Regardless; all our cable systems have been installed in conduit for many years.

Going forward, we have found that many of the earliest URD systems are approaching the end of their useful life. We expect to see an increase in the number of systems (and cable miles) replaced over the next 10 years. We are in the preliminary stages of studies to quantify the in-service cable of various vintages, and to develop replacement schedules and strategies.

New cross-linked polyethylene (XLP) cable compounds have proven to be more reliable, with better longevity. We have also moved to jacketed cable, which is expected to significantly enhance reliability and longevity. We expect better lifetime performance than earlier cables. However, even these cables are not expected to last longer than 30-40 years. Many of our earliest systems are already approaching this timeframe.

We have been experimenting with silicone injection technologies as a means to address the aging cable issue. We have had moderate success. This may represent the most cost-effective alternative for restoring reliability and longevity to aging cable systems.

C. Technical Developments

1. Do you expect development of fuel cells, solar energy, or other technologies (Distributed Generation) to have an impact on your distribution system? In your opinion, when and how will it impact?

Response: Yes, we expect the development of distributed generation to impact our distribution system in the future. It is unclear when, and how. Photovoltaics and microturbines are just now beginning to show up for interconnections. New Hampshire recently implemented legislation to allow net metering of renewable resources, which improved the economics of these projects. It is expected that these types of interconnections will accelerate over the next 5 years, but will still have a minimal impact on our distribution system.

Beyond 5 years, other technologies, including fuel cells, may become economically and commercially viable. If we see a significant increase in such generation, the distribution system will definitely be impacted, but it is not clear how. There may be a decrease in plant investment needed to serve new load. On the other hand, protection and control systems may become more complicated and it may become necessary to upgrade such systems to accommodate substantial interconnections of DG at the distribution level.

2. Do you know about or have any information concerning new or improved distribution equipment that you have or may yet incorporate into your system, which may affect the service life of similar kinds of equipment you are presently using?

Response: No.

3. Are most street lights already converted to sodium vapor? If not, how far along are you? When will you complete?

Response: Yes.

D. Other Considerations

1. Is any kind of new treatment or maintenance or inspection program in place or scheduled that you expect will prolong the life of wood poles? Explain.

Response: At this time there is no established program. However there is a committee analyzing treatment options to prolong the life of wood poles.

2. Do you have any line transformers repair or rehabilitation program involving substantial numbers of transformers or certain kVA ratings? Details?

Response: No.

3. Are any particular sizes, types or makes of transformers being retired? Details?

Response: No.

4. Are any particular meter makes, models or meters of certain vintage years being retired as a general program? Details?

Response: Yes. Each year we remove 500 meters from the field for testing. Of those 500, any meter that meets the criteria listed below is retired:

a. All 4 dial Westinghouse
b. All Westinghouse D4-S
c. All Westinghouse CA3
d. All Westinghouse CA5
e. All P meters with a mechanical demand register
f. All class 200 meter with a constant
g. All Sangamo meters with E1 demand registers
h. All damaged meters
i. All T meters numbered below 150
j. All PN meters numbered below 2000
k. All W meters numbered below 459

5. Do you have anything like an "automatic retirement" program for meters or transformers? For example, some companies retire any meter and/or transformer of vintage 19xx or older which comes into "the shop" for any reason.

Response: Transformers - No.

Response: Meters – Each year we remove 500 meters from the field for testing. Of those 500, any meter that meets the criteria listed below is retired:

a. All 4 dial Westinghouse
b. All Westinghouse D4-S
c. All Westinghouse CA3
d. All Westinghouse CA5
e. All P meters with a mechanical demand register
f. All class 200 meter with a constant
g. All Sangamo meters with E1 demand registers
h. All damaged meters
i. All T meters numbered below 150
j. All PN meters numbered below 2000
k. All W meters numbered below 459

III. GENERAL PLANT

A. Office and Service Center Buildings

Please identify any that are scheduled for retirement within the next five to ten years. Upon retirement, are any likely to be demolished or are all more likely to be sold? Of those to be sold, is the buyer likely to be really after the building or the site?

B. Office Furniture and Equipment (FERC Account 391) and Communication Equipment (FERC Account 397).

Both these accounts contain a great deal of electronic equipment which is subject to technological obsolescence.

Our primary concern is whether the property accounting mortality history or the past five to fifteen years is likely to representative of the equipment which currently exists.

If you are replacing or are about to replace the SCADA (central or RTU's) equipment, mobile radios and/or base station, we should be advised.

C. All Other General Plant

Please advise us of any recent inventories, any relatively significant equipment retirements and acquisitions, and any changed practices/policies, etc. which might impact upon the life of such equipment, including retirement unit size.

Partial List of Retirement Causes

Civil Works

Urban Renewal
Highway/Street Projects
Sewer/Water Projects
Airport Projects
Lake/River/Canal/Harbor Projects

Technological Improvements

Transformer Load Management

Pole Inspection/Rehabilitation Programs

Increased Incidence of Storm Damage

Lack of Maintenance/Repair Expertise and/or Parts

System Upgrades/Improvements

Voltage Increases

Reconductoring of Lines

Inventory

Change in Retirement Unit Size

Change in Definition (of dollar limit) of Capital vs. Expense

MARK FRAPPIER
SKIP
TRESSA 1/28/02

Sawyer Passway ~24 acres
old mfg. gas plant & old steam elec. plt
old 4kv-13kv indoor subs retired
4kv still exists
Was NG/oil CT at SP - sold in late 1990s
Fitchburg HQ sold 1980 to — Service Center (John Fitch Hwy)
Long term leased back ALL leasehold improvements are capitalized / Acct 390.2

SP & downtown offices OLD TIME
ops center — business center

1999 - renovated Svc Ctr (leased) ∴ capital $
entire office spaces area
LNG plant output being expanded - 2 new boilers + 1 new vaporizers etc.

AND Repl. control system

Flagg Pond - Tr Sub. (bought in 1977 from NES) 4-115kv in Ring bus
2 xfrmrs 115/69 - 60/80 MVA
3 - exits 69kv 1 - to wood burning plant (Pine Tree Power) auto xfrmr

All OCBs 115kv - 65 - GE 1970 & ITE 1971
Nobody makes 69 nor 115kv OCBs now

∴ life determinant

#1 115/69 XFRMR Failed (int. bushing exploded) (80MVA now, 60/80/100MVA) ~1992 (insurance pmt)
Bought a spare
34/40/50 failed - rewound/upgraded to 75 MVA 1980s
Rewound twice Has 14,4kv Tertiary

SWHSE to be replaced

69 Yale 6 BRKRS

No LTC #1 Mile 69kV UG Line to Pine Tree PH
GE 1971 VIN 69kV
(2) 24/32/37 MVA 115-69kV Spare
Remanufactured 1971

1948 OCB replaced by SF_6 1997
GEC-ALSTHOM-2000A
1-McGraw OCB single tank 1992

#2 auto 60/80/100 MVA - ABB 1996 115/69
#1 & #2 Backup one another

one other spare 115/69 30/40 to be replaced
Both by one bigger - unknown when

Corr. metal SW/SE to be replaced soon
To replace all condit/bus duct

Tr Lines - good shape 69kV
Mostly from 1960's
PRINCETON RD Sub
Big, expensive ret. walls Acct 361
Supplies big recycle plant nearby - 37MW @ 24.7kV
2-69kV in 3 13kV lines feed it
Waukesha 2-12/16/20 MVA LTC #1 failed - don't need
xfmr #2 & 3 - 1995 69/13kV the capacity here
6-VCB's 1992 ABB

Bought Fed Pacific Al Tubes,
str. steel members

No SW/SE

2-69kV S&C High Side #1995
SF_6 #1998

Total
± 13 substa's
12D
1T

MARK
SKIP
TRESSA

01/28/02

~~Nockege~~

Wallace Rd. Sw Sta (once had 4KV/13KV)
No transformation since ±1995 'Low' yard empty
4-old (GE) 4KV OCBs ±1948
or LM-3 Agitator OCB
1-ABB VCB 3-Reclosers
1-Sectionalizer
Galv. steel bus str. Cu bus
No SWHSE

Nockege St. Substa.
Old rusty bus str. & fence To repl. fence
13.8/4KV XFRMR 5MVA 3-4KV Circuit out 2-~~…~~ OH ckts 1-UG ~~…~~
Reactor and 4KV* reclosers 1 to be eliminated soon — allows UG to UG system
1-13KV VCB ABB Built ±1940
Lots of rust—fence & bus str.
2-13.8KV circs out
and 1-GE VIR (vac. inter. recl.) 13KV

*±1948

Sawyer Passway Sub - Steve Baker Klew
10-Breakers GE VCB In 2000 1200A
8-D 2-sub transm. Capacitors
8-Dist circs out -13.8KV
2-Summer St. (13.8)
2-Waukesha XFRMR 12/16/20MVA 69/13KV
2-Hi side S&C circ switches SF6
Prefab metal SWHSE "TRACHTE" bldg
Batteries inside/Fenced in

David Joyce

01/28/02

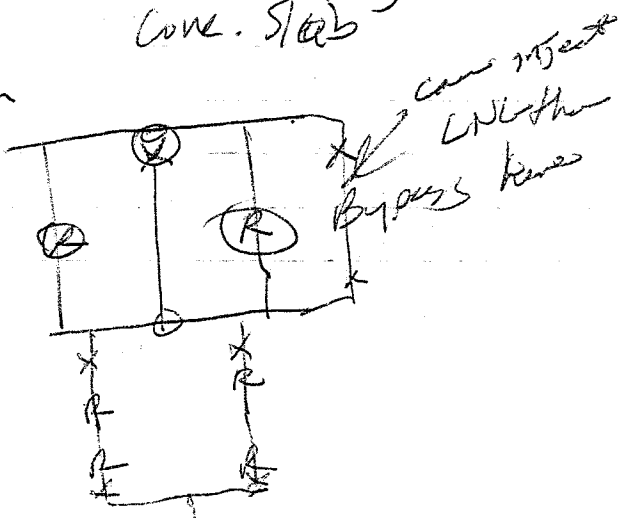
in 69kV
2 lines — Fed 3 Flagg Pole (Banks up Sawy. Pass)
Summer St. Sub Conc bl. sw house
69kV Switching
13.8 Distr. sub

3-69kV cut 1 XFmr GE* 1969 1 AC-26E
GE FKOCB } -3 Single tank OCB
& FKA-1962 } -3 triple tank OCB
Galv steel bus str.
To reinsulate (all) the sub in 2002
* To have LTC added & rewound 21/28/35MVA
GE ± 1965-1970 VIN

13kV:
1 GE ACB metal clad ±2000A
Big fault curr. reactors 63kV Capacitors
2 line recloser types all ± 1970
6-Single tank GE OCB's
All 6 to be replaced w/ higher fault current capab. Wthin 5 yrs. or less
Reactors & bus to go

OCB's to be retired unless needed for cannibalize
-1 inch one will be kept
reclosers might be kept

Sawyer Passway M&R in Conc. Mod Bldg
Conc. Slab
H.P 100PSI
L.P ±10" water column



introduced himself as
Dave Joyce chief gas passer
01/20/02

LNG PLT

Needs redundant off loading pump (second)
Truck – tank

2 new boilers not repl. NOW outside type 3.6x10⁶ BTU/HR each
one circ. pump
TeleDyne Laars OUTSIDE

Old boiler in cond bldg
Cleaver Brooks Firetube Package boiler 60PSI
Two circ. pumps 7,323,000 Btu/Hr 1980
Serves one horiz. vaporizer
Serves new vert. vaporizer } Both ± 15" ø

Ambient trailer mounted vaporizer – only good for (30± MCF/hr) in warm weather

Tank – 55K gal Hub (49,130 gals of LNG)
1 ft³ = 600 ft³ vapor

INNER AL
Perlite vacuum
Outer Carbon Steel

400 volt must motors

Pressure support
Cond. block
Control house

SCADA to Fitchburg

HMI human machine interface
NEW Bristol Babcock DPC 3330 (computer)
Solid state (=Does away with hundreds of relays)

Microwave
alarm system on fences
UV/IR
Infrared

100KW EG (NG fuel)
inside control house
Enough to run plant

ODORANT UNIT repl. last year (old system not yet retired)

Tenn. Bldg – [illegible] two runs [illegible]
Royal
550/100psi 4 Boilers Burnham [illegible]
01/28/02

LPG Plant & Tenneco take sta
Mounded Tanks
6 – 60K tanks

Corrosion control
impressed current (via rectifier)
One fuel feed pump (propane)
Want to add second Red Liquid
Yellow vapor Orange = liquid fill tank
Brown ~~[illegible]~~ placement pump
recirc. line back to tank

LPG
@ 40°F at 90 psi
3 loading stations No out loading
Two pad mt XFRMRS to be changed out
4KV → 480V 4KV → 208V 3ϕ
Will be feed from 4KV AND 13KV (Sub nearby)

New radiator on roof for all new compressors
One of five done already
and New digital control system
Will add new odorization / New odorant system (1990)
Bigger tank 500 gal vs 57 gal
OUTDOOR horiz. Vaporizer BSEB #1960 Backup
Black Silvis Bryson
S. Walls
Vertical Vaporizer – Primary #1989
CB package boiler 1,046,000 BTU/HR x 1,000
#1980 New bldg addition
Mixing room redone in 1989
Chromatograph
New compressor – Atlas Copco 440 CFM 100 KP [illegible]
5 others to be replaced + new control system
JOY & IR Recip. Compr.
elect. motor drive 75 HP